

**3D GRAPHICS RENDERING ENGINE FOR PROCESSING AN INVISIBLE  
FRAGMENT AND A METHOD THEREFOR**

**ABSTRACT OF THE DISCLOSURE**

5        Provided are a 3D graphics rendering engine for processing fragments and a  
3D graphics rendering engine method. The 3D graphics rendering engine positions a  
depth filter having a specific z value in a depth filtering circuit and compares a depth  
value of each of a plurality of fragments forming a first object being rasterized in a 3D  
space with a depth value of the depth filter. Then, the 3D graphics rendering engine  
10      stores data, which is mapped to the depth filter and corresponds to each of the  
fragments of the first object, in a storage device, based on the result of the comparison  
concerning the first object and rasterizes each of a plurality of fragments forming a  
second object. After that, the 3D graphics rendering engine renders the fragments of  
15      the first object and compares a depth value of each of the fragments of the second  
object in the 3D space with the depth value of the depth filter and removes at least one  
fragment from the second object that is overlapped with the first object, based on the  
result of the comparison concerning the second object and based on the data  
corresponding to each of the fragments of the first object, the data being stored in the  
storage device. In addition, the 3D graphics rendering engine corrects the position of  
20      the depth filter in real time according to the spatial distribution of rendered fragments.